BACKPLANE CONFIGURATION WITH SHORTEST-PATH RELATIVE-SHIFT ROUTING

ABSTRACT OF THE DISCLOSURE

5   A novel backplane routing and configuration (200) supports a full mesh architecture. In this novel configuration, a circuit pack determines which backplane signals to use for a transmission based on the relative distance across the backplane between the board sending the communication and the board receiving the communication. Boards

10   sending the same relative distance use the same rows of signals (204). That is, each row associated with the meshed interconnection is assigned a relative shift or distance for a connection. The rows (204) that represent a greater relative distance for shift between boards are intermixed next to rows (204) that have a relatively short distance between shifts or boards.

15   In this manner, the number of layers required is minimized and the utilization of routing channels is optimized. In particular, for a N slot backplane with one routing channel between rows, (N/2 +1) layers are required, rather than N layers. And, vertical routing is not required.

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